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EXAMINER

HO, THOMAS Y

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 09/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/821,932

Applicant(s)

BOYD, DENNIS

Examiner

Thomas Y Ho

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 3/30/01
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 13-15, 21, and 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Boyd (USPN5107557).

As to claim 1, Boyd discloses a mattress comprising:

- A first inflatable compartment (13) having a length and width, when inflated, sufficient to support a human body.
- Said compartment (13) having a top, bottom, and sides.
- Said first compartment being composed of at least two layers of vinyl (col. 1, ln. 65; col. 2, ln. 50).
- One layer of vinyl forming the top of the compartment and the second forming the bottom.
- A second inflatable compartment (23) disposed on the top of the first inflatable compartment (13) and secured thereto at least along a portion of the first inflatable compartment (13) at a point spaced inwardly from the sides of said first inflatable compartment (13) (fig. 13).

Art Unit: 3677

- Said second compartment (23) extending generally the length and width of the top of the first compartment (13).
- Said second compartment (23) being of a size, when inflated, sufficient to support a human body.
- Said second compartment (23) being composed of at least two layers of vinyl (col.2, ln.60-62) distinct from the two layers of vinyl forming the first compartment (13).
- Said second compartment (23) being inflatable to give the top of the air mattress a soft, pillow-like appearance and feel (col.3, ln.10-17).

As to claim 3, Boyd discloses a mattress wherein:

- The bottom layer of the said second compartment (23) is secured to the top of the upper layer of the first compartment (13) (fig.13).

As to claim 13, Boyd discloses a mattress wherein:

- The first compartment (13) and the second compartment (23) are sealed together at a point recessed from the periphery of the first compartment (13), thereby permitting limited relative movement of the second compartment (23) with respect to the first compartment (13) along the edge of the mattress (fig.13).

As to claim 14, Boyd discloses a mattress wherein:

- The seal is recessed approximately one inch (fig.13).

As to claim 15, Boyd discloses a mattress wherein:

- The vinyl layers of the second compartment (23) are connected together by a first vinyl strip extending between the layers along the periphery of the second

Art Unit: 3677

compartment (23). It is clearly shown that a vinyl strip acts as a connecting sidewall to the two layers that define the second compartment (23) (fig.1).

- The vinyl layers of the first compartment (13) are connected together by a second vinyl strip extending between the layers along the periphery of the first compartment (13).

As to claim 21, Boyd discloses a mattress wherein:

- The second compartment (23) has a single peripheral seam (fig.13).

As to claim 23, Boyd discloses a mattress wherein:

- The two layers of the second compartment (23) are secured together at a plurality of discontinuous positions (col.4, ln.43-47).

As to claim 24, Boyd discloses a mattress comprising:

- A first inflatable compartment (13) having sides with a length and a width and defining a periphery.
- A second inflatable compartment (23) extending generally the length and width of the periphery.
- A perimeter seal connecting said first inflatable compartment (13) to said second inflatable compartment (23).
- Wherein said perimeter seal is spaced inwardly from the periphery (fig.13).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4-5, 16-17, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd (USPN5107557) in view of Saltness (USPN3251075).

As to claim 2, Boyd fails to disclose or suggest the following limitations:

- Said first compartment and said second compartment are secured together adjacent a fluid communication channel connecting the first and second compartments.

Saltness discloses an inflatable pillow having first and second inflatable compartments sealed together on opposing sides of a diaphragm having a plurality of fluid communication channels (41) formed therein (col.2, ln.69-72; col.3, ln.1-5), and the purpose of the diaphragm to prevent the side and end panels from blowing outwardly beyond desired shape. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have a fluid communication channel, as taught by Saltness, to provide a means for maintaining a desired shape upon inflation.

As to claim 4, Boyd fails to disclose or suggest the following limitations:

- The second compartment has a soft, non-vinyl fabric secured to the top thereof.

Saltness discloses an inflatable pillow having first and second inflatable compartments, with both compartments covered by an expansible fabric covering (col.2, ln.10-15) for comfort, and to provide a covering that can expand with the article. It would have been obvious to one of

Art Unit: 3677

ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have a fabric covering, as taught by Saltness, to increase comfort.

As to claim 5, Boyd fails to disclose or suggest the following limitations:

- Said first and second compartments are in fluid communication with each other.

Saltness discloses an inflatable pillow having first and second inflatable compartments sealed together on opposing sides of a diaphragm having a plurality of fluid communication channels (41) formed therein (col.2, ln.69-72; col.3, ln.1-5), and the purpose of the diaphragm to prevent the side and end panels from blowing outwardly beyond desired shape. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have a fluid communication channel, as taught by Saltness, to provide a means for maintaining a desired shape upon inflation.

As to claim 16, Boyd fails to disclose or suggest the following limitations:

- The only access to the interior of the first and second compartments for inflation of both compartments is through a single valve.

Saltness discloses an inflatable pillow wherein a single valve is used to inflate both compartments. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have a single valve, as taught by Saltness, to reduce the number of valves needed to inflate the article, thus decreasing the cost.

As to claim 17, Boyd fails to disclose or suggest the following limitations:

- The single valve is disposed in a wall of the first compartment.

Saltness discloses an inflatable pillow wherein a single valve that is disposed on the wall of a first compartment is used to inflate both compartments. It would have been obvious to one

Art Unit: 3677

of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have a single valve on the wall of the first compartment, as taught by Saltness, to reduce the number of valves needed to inflate the article, thus decreasing the cost.

As to claim 25, Boyd fails to disclose or suggest the following limitations:

- At least one additional seal connecting said first inflatable compartment and said second inflatable compartment.
- Said additional seal includes a fluid communication channel between said first inflatable compartment and said second inflatable compartment.

Saltness discloses an inflatable pillow having first and second inflatable compartments sealed together on opposing sides of a diaphragm having a plurality of fluid communication channels (41) formed therein (col.2, ln.69-72; col.3, ln.1-5), and the purpose of the diaphragm to prevent the side and end panels from blowing outwardly beyond desired shape. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have a fluid communication channel, as taught by Saltness, to provide a means for maintaining a desired shape upon inflation.

As to claim 26, Boyd discloses a mattress comprising:

- A first inflatable compartment (13) having sides with a length and a width and defining a periphery.
- A second inflatable compartment (23) extending generally the length and width of the periphery.
- Said second inflatable compartment comprising a pair of layers joined together by a plurality of discontinuous seals (col.4, ln.39-47).



Art Unit: 3677

- A perimeter seal connecting said first inflatable compartment (13) to said second inflatable compartment (23).
- Wherein said perimeter seal is spaced a distance from the periphery to give the air mattress a soft, pillow-like appearance and feel (col.3, ln.9-17) when said second inflatable compartment (23) is inflated, and to permit limited relative movement of the second compartment (23) with respect to the first compartment (13).

Boyd fails to disclose or suggest the following limitations:

- At least one additional seal connecting said first inflatable compartment to said second inflatable compartment.
- Said additional seal includes a fluid communication channel between said first inflatable compartment and said second inflatable compartment.

Saltness discloses an inflatable pillow having first and second inflatable compartments sealed together on opposing sides of a diaphragm having a plurality of fluid communication channels (41) formed therein (col.2, ln.69-72; col.3, ln.1-5), and the purpose of the diaphragm to prevent the side and end panels from blowing outwardly beyond desired shape. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have a fluid communication channel, as taught by Saltness, to provide a means for maintaining a desired shape upon inflation.

Claims 6-12 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd (USPN5107557) in view of Wolfe (USPN5598593).

Art Unit: 3677

As to claim 6, Boyd fails to disclose or suggest the following limitations:

- The vinyl layers composing the second compartment are secured together by a plurality of ribs extending between the top of the second compartment and the bottom of the second compartment.

Wolfe discloses an inflatable air bed having a second compartment (20) composed of two layers, with the layers secured together by a plurality of ribs (34) extending between the top and bottom surfaces (col.3, ln.45-62) to limit outward expansion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have ribs in the second compartment, as taught by Wolfe, to limit outward expansion.

As to claim 7, Boyd fails to disclose or suggest the following limitations:

- The ribs extend transversely across the second compartment, said second compartment having channels for flow of air around or through the ribs.

Wolfe discloses an inflatable air bed having a second compartment (20) composed of two layers, with the layers secured together by a plurality of transverse ribs (34) extending between the top and bottom surfaces (col.3, ln.45-62), and having channels for air flow around the ribs, to limit outward expansion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have ribs in the second compartment, as taught by Wolfe, to limit outward expansion.

As to claim 8, Boyd fails to disclose or suggest the following limitations:

- The first and second compartments are substantially free to move with respect to each other except at the periphery thereof.

Art Unit: 3677

Wolfe discloses an inflatable air bed wherein the first and second compartments (12, 20) are only attached at the periphery thereof (col.5, ln.5-10) so that each layer can be independently adjusted (col.1, ln.40-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have both compartments free to move with respect to one another, as taught by Wolfe, so each layer can be independently adjusted.

As to claim 9, Boyd fails to disclose or suggest the following limitations:

- The first compartment has ribs extending between the layers of vinyl making up the first compartment.
- Wherein the second compartment has ribs extending between the layers of vinyl making up the second compartment.

Wolfe disclose an inflatable air bed having a first compartment (12) with ribs (30) extending between the top and bottom layers (col.3, ln.29-35), as well as a second compartment (20) composed of two layers, with the layers secured together by a plurality of ribs (34) extending between the top and bottom surfaces (col.3, ln.45-62) to limit outward expansion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have ribs in the first and second compartments, as taught by Wolfe, to limit outward expansion.

As to claim 10, Boyd fails to disclose or suggest the following limitations:

- The ribs of the first compartment are substantially taller than the ribs of the second compartment.

Art Unit: 3677

Wolfe discloses an inflatable air bed having a first compartment (12) with ribs (30) as well as a second compartment (20) with ribs (34) to limit outward expansion. Furthermore, owing to the fact that the first compartment (12) is twice as tall as the second compartment (20), the first compartment ribs are substantially taller than the ribs of the second compartment (col.6, ln.30-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first and second compartments to have ribs, as taught by Wolfe, to limit outward expansion.

As to claim 11, Boyd fails to disclose or suggest the following limitations:

- The ribs of the first compartment are at least twenty-five percent taller than the ribs of the second compartment.

Wolfe discloses an inflatable air bed having a first compartment (12) with ribs (30) as well as a second compartment (20) with ribs (34) to limit outward expansion. Furthermore, owing to the fact that the first compartment (12) is twice as tall as the second compartment (20), the first compartment ribs more than twenty-five percent taller the ribs of the second compartment (col.6, ln.30-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first and second compartments to have ribs, as taught by Wolfe, to limit outward expansion.

As to claim 12, Boyd fails to disclose or suggest the following limitations:

- The ribs of the first and second compartments are composed of vinyl.

Wolfe discloses an inflatable air bed wherein the ribs (30, 34) of the first and second compartments (12, 20) are composed of vinyl (col.4, ln.45-47), and are used to limit outward expansion. It would have been obvious to one of ordinary skill in the art at the time the

Art Unit: 3677

invention was made to modify the first and second compartments to have vinyl ribs, as taught by Wolfe, to limit outward expansion.

As to claim 22, Boyd fails to disclose or suggest the following limitations:

- The second compartment has at least two seams.

Wolfe discloses an inflatable air bed having a second compartment (20) having at least two seams to provide vertical height between the top and bottom layers for the insertion of ribs (34) to limit outward expansion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have a second compartment with at least two seams, as taught by Wolfe, to make room for beams that limit outward expansion.

Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd (USPN5107557) in view of Chung (USPN6332760).

As to claim 18, Boyd fails to disclose or suggest the following limitations:

- A pump for inflating and/or deflating the first and second compartments.

Chung discloses a pump (14) for inflating and/or deflating an inflatable product without manual exertion of energy by the user. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to include a pump, as taught by Chung, to inflate the mattress using electricity rather than manually.

As to claim 19, Boyd fails to disclose or suggest the following limitations:

- The pump is permanently attached to a valve disposed in a wall of the first or second compartment.

Art Unit: 3677

Chung discloses a pump (14) for inflating and/or deflating an inflatable product without manual exertion of energy by the user. The pump (14) is detachable, but could be considered permanently attached if the user never utilizes the detaching feature. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to include a pump, as taught by Chung, to inflate the mattress using electricity rather than manually, and to leave the pump attached, to prevent losing the pump.

As to claim 20, Boyd fails to disclose or suggest the following limitations:

- The pump is removably attachable to a valve disposed in a wall of the first or second compartment.

Chung discloses a detachable pump (14) (col.2, ln.53-65) for inflating and/or deflating an inflatable product without manual exertion of energy by the user. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to include a pump, as taught by Chung, to inflate the mattress using electricity rather than manually.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN5727270 to Cope discloses a valveless self sealing fluid or gas container.

USPN5740573 to Boyd discloses an air bed with circumferential belt.


USPN6073291 to Davis discloses an inflatable medical patient transfer apparatus.

Art Unit: 3677

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Y. Ho whose email address is [thomas.ho@uspto.gov](mailto:thomas.ho@uspto.gov) and telephone number is (703) 305-4556. The examiner can normally be reached on M-F 9:30AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (703) 306-4115. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-3366.

TYH  
September 3, 2002



**ROBERT J. SANDY**  
**PRIMARY EXAMINER**